Pickerel Lake

Site Description

Location

Water designation number (WDN)	22-0002-00
Legal description	T124N-R53W-Sec.15,22,23,26,27,34,35
County (ies)	Day
Location from nearest town	6.0 miles northeast of Grenville, SD

Survey Dates and Sampling Information

Survey dates	June 17-19, 2014 (FN, GN) September 2, 2014 (EF-WAE)
Frame net sets (n)	18
Gill net sets (n)	6
Electrofishing-WAE (min)	60

Morphometry (Figure 1)

Watershed area (acres)	17,165
Surface area (acres)	981
Maximum depth (ft)	41
Mean depth (ft)	16

Ownership and Public Access

Pickerel Lake is a meandered lake owned by the State of South Dakota and the fishery is managed by the SDGFP. Four public access sites exist on Pickerel Lake; two are located within the Pickerel Lake Recreation Area (East and West Unit); one at the "Old Pickerel Lake Hatchery Site" located south of the Pickerel Lake Recreation Area-East Unit; and a section line access point, which does not include a boat ramp, in the northwest corner of the lake (Figure 1; Figure 2). Lands adjacent to the lake are owned by the State of South Dakota, Bureau of Indian Affairs, and private individuals. The shoreline is highly developed, with the exception of lands within the Pickerel Lake Recreation Area.

Watershed and Land Use

Land use within the Pickerel Lake watershed is primarily agricultural with a mix of pasture or grassland, cropland, and scattered shelterbelts.

Water Level Observations

The South Dakota Water Management Board established OHWM is 1845.6 fmsl, and the outlet elevation of Pickerel Lake is 1844.9 fmsl. On May 6, 2014 the elevation was 1845.6 fmsl; 0.7 ft higher than the fall 2013 elevation of 1844.9 fmsl.

Fish Management Information

Primary species	black crappie, bluegill, smallmouth bass, walleye, yellow perch
Other species	black bullhead, common carp, emerald shiner, largemouth bass, northern pike, rock bass, spottail shiner, white bass, white sucker
Lake-specific regulations	smallmouth/largemouth bass: only those <14", or 18" and longer may be taken; of those no more than one may be 18" or longer walleye: minimum length 15"
Management classification	warm-water permanent
Fish consumption advisories	none

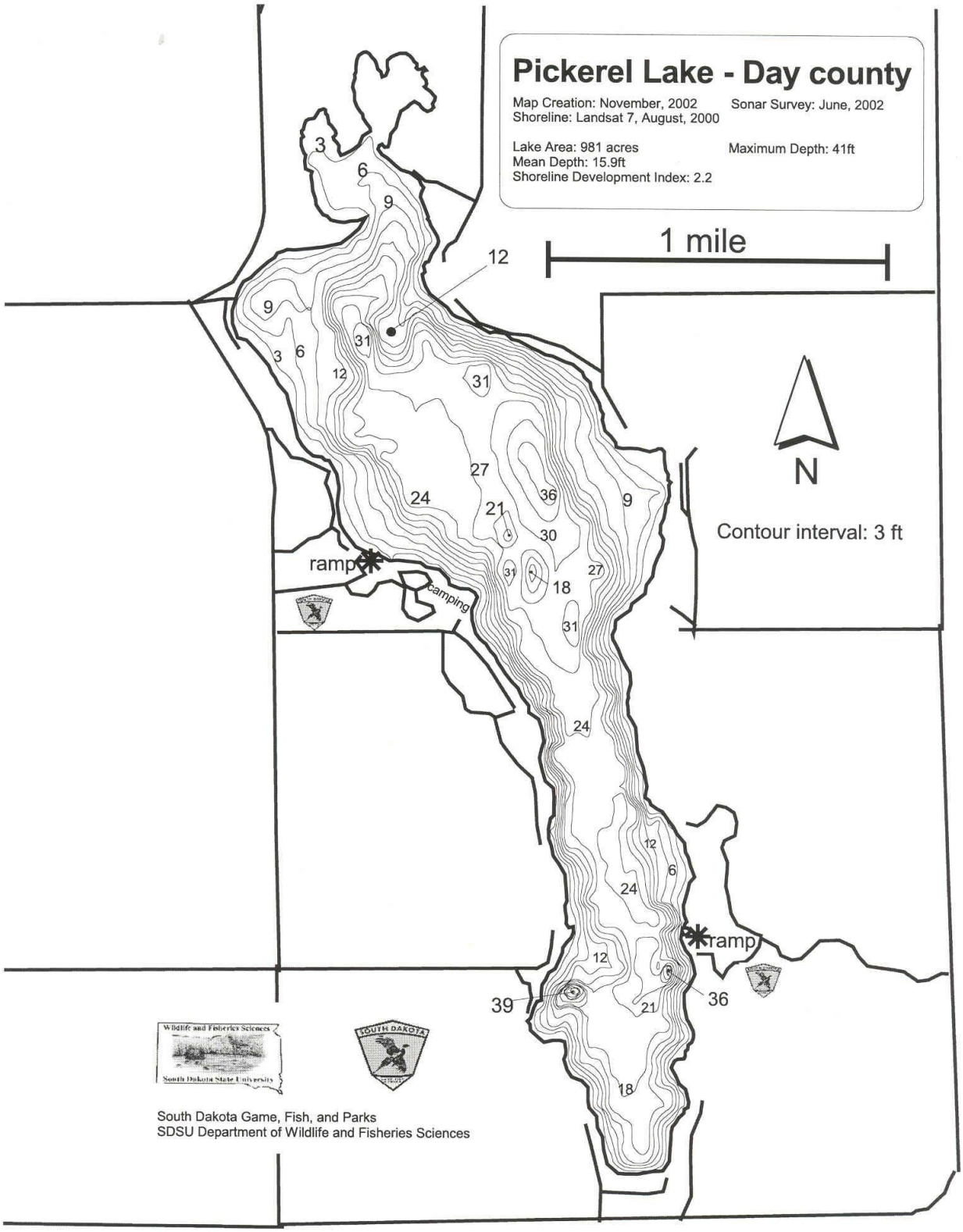

Figure 1. Map depicting access locations and depth contours for Pickerel Lake, Day County, South Dakota.

Figure 2. Map depicting geographic location of several Day County, South Dakota lakes including Pickerel Lake (top). Also noted are public access sites and standardized net locations for Pickerel Lake. PLFN= frame nets; PLGN=gill nets

Management Objectives

1) Maintain a mean frame net CPUE of stock-length black crappie ≥ 10, a PSD of 30-60, and a PSD-P of 5-10.

2) Maintain a mean frame net CPUE of stock-length bluegill ≥ 25, a PSD of 30-60, and a PSD-P of 5-10.

3) Maintain a moderate density smallmouth bass population with a PSD of 40-70, and a PSD-P of 10-40.

4) Maintain a mean gill net CPUE of stock-length walleye ≥ 10, a PSD of 30-60, and a PSD-P of 5-10.

5) Maintain a mean gill net CPUE of stock-length yellow perch ≥ 30, a PSD of 30-60, and a PSD-P of 5-10.

6) Maintain a mean frame net CPUE of stock-length black bullhead ≤ 100.

Results and Discussion

Pickerel Lake is the uppermost lake in a chain of lakes known as the Waubay Lakes Basin. Pickerel Lake is highly developed with much of the shoreline supporting residential housing and cabins. In addition, the Pickerel Lake Recreation Area (East and West Unit) is located on the lake shore (Figure 1; Figure 2). The lake is a popular recreational destination, especially during the summer months. Currently, Pickerel Lake is primarily managed for panfish (i.e., black crappie, bluegill, and yellow perch), smallmouth bass and walleye. However, other species such as northern pike, rock bass, and white bass also contribute to the fishery.

Primary Species

Black Crappie: The mean frame net CPUE of stock-length black crappie was 1.0 (Table 1) and well below the minimum objective (≥ 10 stock-length black crappie/net night; Table 3). Since 2005, the mean frame net CPUE of black crappie has ranged from a low of 1.0 (2014) to a high of 15.6 (2008; Table 2). Based on the 2014 frame net catch, relative abundance is considered low.

Frame net captured black crappie ranged in TL from 24 to 31 cm (9.4 to 12.2 in), had a PSD of 100 and a PSD-P of 94 (Table 1; Figure 3). The PSD and PSD-P were above management objectives of 30-60 and 5-10 (Table 3) as individuals from the 2005 and 2010 year classes, which exceeded preferred-length (25 cm; 10 in), comprised the entire sample (Table 4; Figure 3).

Black crappie from the 2005 year class, which have comprised a high proportion of the population in recent years (Table 4), had a weighted mean TL at capture of 298 mm (11.7 in) at age 9; while the 2010 cohort had a weighted mean TL at capture of 253

mm (10.0 in) at age 4 (Table 5). Frame net captured black crappie had mean Wr values that ranged from 81-118 for all 10-mm length groups sampled. A decreasing trend in condition was apparent as TL increased.

Bluegill: In 2014, frame nets captured 11 stock-length bluegill that ranged in TL from 11 to 24 cm (4.3 to 9.4 in; Figure 4). The mean frame net CPUE of 0.6 (Table 1) was well below the minimum objective (≥25 stock-length bluegill/net night; Table 3) and the lowest recorded since 2005 (Table 2). Currently, relative abundance appears to be low.

Given the low sample size, few inferences can be made concerning size structure, growth or condition.

Smallmouth bass: Research has recommended that smallmouth bass population dynamics be monitored using standardized spring (May and June) night electrofishing over suitable habitat (i.e., rocky substrate) in northeast South Dakota glacial lakes (Bacula 2009). Spring night electrofishing to monitor smallmouth bass population parameters in Pickerel Lake is conducted biennially during odd years (e.g., 2015, 2017, 2019…).

Walleye: The mean gill net CPUE of stock-length walleye was 12.3 (Table 1) and above the minimum objective (≥ 10 stock-length walleye/net night; Table 3). Since 2005, walleye relative abundance, as index by mean gill net CPUE values, has ranged from a low of 4.8 (2009) to high of 21.3 (2006; Table 2). Based on the 2014 gill net CPUE, relative abundance is considered high.

Walleye captured in gill nets ranged in TL from 18 to 55 cm (7.1 to 21.7 in.), had a PSD of 16 and a PSD-P of 1 (Table 1; Figure 5). Both the PSD and PSD-P were below management objectives of 30-60 and 5-10, indicating a population primarily comprised of smaller (i.e., < 38cm; 15 in) individuals (Table 3). In 2014, approximately 16% of walleye in the gill net catch were above the 381-mm (15-inch) minimum length restriction (Figure 5).

Age estimates made using otoliths revealed the presence of nine year classes (2001 and 2006-2013) in the 2014 gill net catch (Table 6). The 2011 cohort, which coincided with a large fingerling stocking, was the most abundant and comprised 55% of walleye in the gill net catch (Table 6; Table 8). Natural reproduction in Pickerel Lake has consistently been poor, with low fall night electrofishing catch rates of age-0 walleye from 1998-2009 and limited contribution of naturally-produced year classes to the gill net catch (e.g., 2009; Table 6). As a result, the walleye population has relied on large fingerling stockings to establish year-classes (Table 6; Table 8; Lucchesi 1997). In 2013, black crappie and bluegill relative abundance appeared to be low (based on the 2012 survey results; Table 2); thus, small rather than large fingerlings were stocked in 2013 (Table 8). Fall night electrofishing suggested that a substantial year class was produced (i.e., mean CPUE of 139.0; Table 1). In 2014, no walleye were stocked and it appears that a weak year class was natural produced (i.e., mean fall night electrofishing CPUE = 10.0; Table 1). Recruitment of both the 2013 and 2014 cohorts is currently unknown and will be assessed in future surveys.

Walleye in Pickerel Lake exhibit growth rates that are similar to other permanent lakes in the region (e.g., Enemy Swim and Clear). Since 2005, the weighted mean TL at capture of age-3 walleye has ranged from 310 to 358 mm (12.2 to 14.1 in); while age-4 walleye had weighted mean TL at capture values that ranged from 322 to 388 mm (12.7 to 15.3 in; Table 7). In 2014, the weighted mean TL at capture of age-3 and age-4 walleyes was 350 and 367 mm (13.8 and 14.4 in), respectively (Table 7). Length-at-capture values are strongly influenced by size of large fingerlings stocked, which can vary substantially. Gill net captured walleye had mean Wr values that ranged from 75 to 90 for all 10-mm length groups represented; The mean Wr of stock-length walleye was 86 (Table 1) and no length-related trends in condition were apparent.

Yellow Perch: The mean gill net CPUE of stock-length yellow perch was 23.2 (Table 1), and below the minimum objective (≥ 30 stock-length yellow perch/net night; Table 3). The 2014 gill net CPUE represented a decrease from the 2013 CPUE of 56.0 (Table 2) and suggested moderate relative abundance.

Gill net captured yellow perch ranged in TL from 14 to 27 cm (5.5 to 10.6 in; Figure 6). The PSD was 86 and the PSD-P was 12; both exceeded management objectives ranges of 30-60 and 5-10, respectively, indicating a population comprised of larger individuals (>20 cm; 8 in; Table 1; Table 3; Figure 6).

Otoliths have been collected from a sub-sample of gill net captured yellow perch from 2009-2014. Age structure information suggests that yellow perch in Pickerel Lake have exhibited consistent recruitment of varying magnitude (Table 9). In 2014, five year classes (2008-2012) were present in the gill net catch (Table 9). Year classes produced in 2009 and 2010 were the most represented and comprised 27% and 48% of yellow perch in the gill net catch (Table 9).

Yellow perch in Pickerel Lake tend to grow slower and be longer-lived than many populations in northeast South Dakota. Since 2009, weighted mean TL at capture values for age-3 yellow perch have ranged from 171 to 202 mm (6.9 to 8.0 in; Table 10). In 2014, the weighted mean TL at capture for age-3 yellow perch was 202 mm (8.0 in; Table 10). As with most populations, males tend to be smaller at a given age than females, particularly at older ages (Table 10). Condition of gill net captured yellow perch was high with mean Wr values > 100 for all length categories (e.g., stock to quality) sampled; the mean Wr of stock-length individuals was 108 and no length-related trends in condition were apparent.

Other Species

Black Bullhead: Since 2005, black bullhead relative abundance has remained low to moderate; mean frame net CPUE values have not exceeded 20.0 (Table 2). In 2014, the mean frame net CPUE of stock-length black bullhead was 10.1 (Table 1) and within the management objective range (≤ 100 stock-length black bullhead/net night; Table 3).

Length-frequency analysis of black bullhead in the frame net catch suggested relative consistent recruitment of low magnitude in recent years, as no 1-cm length groups from 11 to 41 cm (4.3 to 16.1 in) were not represented (Figure 7). The PSD was 63 and the PSD-P was 48 (Table 1). No age or growth information was collected.

Mean Wr values ranged from 82 to 95 for all length categories (e.g., stock to quality) sampled; a slight increasing trend in condition was apparent as TL increased. The mean Wr of stock-length black bullhead was 89 (Table 1).

Northern Pike: Northern pike typically are not sampled effectively during mid-summer fish community surveys. As a result, mean gill net CPUE values are often low. Northern pike relative abundance in Pickerel Lake has generally been considered moderate to high with mean gill net CPUE values that ranged from 0.5 to 6.0 from 2005-2014 (Table 2). In 2014, the mean gill net CPUE of stock-length northern pike was 3.0 (Table 1) and relative abundance appears to be high.

No age and growth information was collected. Northern pike sampled in gill nets ranged in TL from 31 to 88 cm (12.2 to 34.6 in), had a PSD of 56, and a PSD-P of 17 (Table 1; Figure 8). Although sample size was low, condition of gill net captured northern pike was similar to that of northern pike captured from other northeast South Dakota glacial lakes with mean Wr values that ranged from 69 to 92 for all 10-mm length groups represented; the mean Wr of stock-length fish was 80 and no length-related trends in condition were apparent.

Rock Bass: The mean frame net CPUE of stock-length rock bass was 6.0 (Table 1). Rock bass captured in the frame net catch ranged in TL from 12 to 27 cm (4.7 to 10.6 in.) with the majority being $\geq$ 18 cm (7 in; Figure 9). The PSD was 70 and the PSD-P was 9 (Table 1).

No age or growth information was collected in 2014. A decreasing trend in condition was apparent as TL increased; however, mean Wr values were $\geq$ 98 for all length categories (e.g., stock to quality) sampled.

Other: Common carp, white bass and white sucker were other fish species captured in low numbers during the 2014 survey (Table 1).

Management Recommendations

1) Conduct fish population assessment surveys on an annual basis (next survey scheduled in summer 2015) to monitor fish relative abundance, fish population size structures, fish growth, and stocking success.

2) Conduct spring night electrofishing on a biennial basis (odd years) to monitor smallmouth bass population parameters.

3) Collect otoliths from black crappie, walleye, and yellow perch; scales from smallmouth bass to assess growth rates and age structure of each population.

4) While panfish (i.e., primarily black crappie and bluegill) relative abundance is low, stock walleye (≈100 small fingerling/acre) to establish additional year classes if fall night electrofishing CPUE of age-0 walleye and gill netting results warrant [i.e., low gill net CPUE of sub-stock (< 25 cm; 10 in) walleye and/or fall night electrofishing CPUE < 75 age-0 walleye/hour].

5) Maintain the 356-457 mm (14-18 in) protected slot length limit on largemouth and smallmouth bass. The regulation is designed to increase the average size of black bass while allowing harvest of small bass to avoid slowing of growth (Blackwell and Lucchesi 2009).

6) Maintain the 381-mm (15 in) minimum length limit on walleye. The regulation is designed to protect smaller fish from harvest and increase average fish size (Lucchesi and Blackwell 2009).

7) Partner with willing landowners on shoreline restoration projects designed to restore native plant fauna along highly-developed shorelines providing improvements to water quality and littoral habitats within the lake.

Table 1. Mean catch rate (CPUE; frame/gill nets= catch/net night, electrofishing= catch/hour) of stock-length fish, proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish, and mean relative weight (Wr) of stock-length fish for various fish species captured in frame nets, experimental gill nets and electrofishing from Pickerel Lake, 2014. Confidence intervals include 80 percent (± CI-80) or 90 percent (± CI-90). BLB= black bullhead; BLC= black crappie; BLG= bluegill; COC= common carp; NOP= northern pike; ROB= rock bass; SMB= smallmouth bass; WAE= walleye; WHB= white bass; WHS= white sucker; YEP= yellow perch

	Abundance		Stock Density Indices				Condition	
Species	CPUE	CI-80	PSD	CI-90	PSD-P	CI-90	Wr	CI-90
Frame nets								
BLB	10.1	5.7	63	6	48	6	89	1
BLC	1.0	0.3	100	0	94	9	99	4
BLG	0.6	0.3	82	22	73	26	117	5
NOP	0.2	0.2	67	67	33	67	73	17
ROB	6.0	1.8	70	8	9	5	105	1
SMB	2.3	1.1	43	13	12	9	88	0
WAE	0.6	0.3	40	30	0	30	80	3
WHB	0.1	0.1	100	0	100	0	86	---
WHS	0.2	0.2	100	0	100	0	---	---
YEP	0.2	0.2	100	0	---	---	90	10
Gill nets								
BLB	0.2	0.2	100	---	100	---	94	---
BLC	7.2	4.7	100	0	88	9	102	2
COC	0.2	0.2	100	---	100	---	103	---
NOP	3.0	0.4	56	21	17	16	80	2
SMB	2.2	1.4	46	26	---	---	94	1
WAE	12.3	4.5	16	7	1	3	86	0
WHB	3.0	1.4	100	0	94	9	96	1
WHS	1.5	1.7	100	0	100	0	108	4
YEP	23.2	11.5	86	5	12	5	108	0
Electrofishing								
WAE[1]	10.0	6.7	---	---	---	---	---	---

[1] Fall night electrofishing-WAE; catch rate (CPUE) represents age-0 walleye/hour

Table 2. Historic mean catch rate (CPUE; gill/frame nets = catch/net night, electrofishing = catch/hour) of stock-length fish for various fish species captured in gill nets, frame nets, and electrofishing in Pickerel Lake, 2005-2014. BLB= black bullhead; BLC= black crappie; BLG= bluegill; COC= common carp; NOP= northern pike; ROB= rock bass; SMB= smallmouth bass; SPS= spottail shiner; WAE= walleye; WHB= white bass; WHS= white sucker; YEP= yellow perch

	CPUE									
Species	2005	2006[1]	2007[1]	2008	2009	2010	2011	2012	2013	2014
Frame nets										
BLB	2.0	1.8	2.6	19.4	14.9	4.6	2.8	4.1	6.2	10.1
BLC	1.4	8.1	12.6	15.6	11.6	4.0	3.8	2.5	9.3	1.0
BLG	4.2	14.2	17.0	29.2	9.7	3.5	2.6	5.4	12.8	0.6
COC	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
NOP	0.5	0.3	0.7	0.7	0.4	0.3	0.0	0.6	0.1	0.2
ROB	7.6	4.7	4.4	8.4	3.7	4.3	1.2	2.6	3.4	6.0
SMB	1.9	5.6	5.6	5.4	1.9	1.9	1.6	5.1	3.2	2.3
WAE	0.2	0.7	0.6	0.3	0.6	0.8	0.1	1.8	0.4	0.6
WHB	0.0	0.2	1.8	0.2	0.1	0.0	3.4	1.9	0.1	0.1
WHS	0.3	0.2	0.9	0.3	0.0	0.3	0.0	0.1	0.0	0.2
YEP	0.8	1.2	2.3	0.2	0.1	0.2	0.5	1.4	0.2	0.2
Gill nets										
BLB	0.0	0.2	4.5	5.5	0.5	0.2	0.7	1.0	1.0	0.2
BLC	3.2	1.8	16.7	26.8	3.8	8.3	2.2	4.5	2.0	7.2
BLG	0.2	0.5	1.5	0.7	0.0	0.2	0.0	0.5	1.3	0.0
COC	0.0	2.5	1.7	0.7	0.3	0.0	0.0	0.0	0.2	0.2
NOP	0.5	1.8	6.0	5.7	3.3	2.7	3.8	3.3	4.7	3.0
ROB	0.5	1.0	1.8	0.2	0.2	0.0	0.7	0.2	0.0	0.0
SMB	3.3	2.0	1.2	0.3	1.3	0.3	0.5	0.8	1.0	2.2
SPS[2]	0.0	0.0	0.0	1.5	0.5	0.7	0.5	0.2	0.3	0.0
WAE	11.7	21.3	12.7	6.0	4.8	9.2	13.5	8.0	17.3	12.3
WHB	0.8	0.7	1.8	0.8	1.2	0.5	0.0	3.2	1.8	3.0
WHS	3.2	2.3	3.5	3.7	1.2	1.7	2.0	1.5	1.7	1.5
YEP	33.5	55.8	43.7	30.0	7.5	21.0	35.8	27.5	56.0	23.2
Electrofishing										
SMB	91.2[3]	240.0[3]	123.5[3]	96.3[3]	77.4[4]	---	51.0[4]	---	286.0	---
WAE[5]	1.9	9.9	12.0	1.0	1.2	---	---	---	139.0	10.0

[1] Monofilament gill net mesh size change (0.75", 1.00", 1.25", 1.50", 2.00" and 2.50")
[2] All fish sizes.
[3] Fall night electrofishing-SMB.
[4] Spring night electrofishing-SMB.
[5] Fall night electrofishing-WAE

Table 3. Mean catch rate (CPUE; gill/frame nets = catch/net night, electrofishing = catch/hour) of stock-length fish , proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish, and mean relative weight (Wr) for selected species captured in gill nets, frame nets, and electrofishing in Pickerel Lake, 2005-2014. BLB= black bullhead; BLC= black crappie; BLG= bluegill; SMB= smallmouth bass; WAE= walleye; YEP= yellow perch

Species	2005	2006[2]	2007[2]	2008	2009	2010	2011	2012	2013	2014	Objective
Frame nets											
BLB											
CPUE	2	2	3	19.4	14.9	4.6	3	4	6	10	≤100
PSD	67	73	28	95	95	91	76	73	86	63	---
PSD-P	50	21	9	1	28	71	73	32	54	48	---
Wr	93	100	102	89	94	90	95	93	92	89	---
BLC											
CPUE	1	8	13	16	12	4	4	3	9	1	≥ 10
PSD	100	99	20	61	97	100	100	56	100	100	30-60
PSD-P	60	99	18	7	4	58	88	47	69	94	5-10
Wr	104	94	117	109	103	99	95	110	96	99	---
BLG											
CPUE	4	14	17	29	10	4	3	5	13	1	≥ 25
PSD	74	38	58	90	98	87	43	61	99	82	30-60
PSD-P	57	15	3	6	44	56	15	6	39	73	5-10
Wr	126	115	116	121	115	112	127	124	125	117	---
Gill nets											
WAE											
CPUE	12	21	13	6	5	9	14	8	17	12	≥ 10
PSD	3	40	53	31	17	4	36	25	16	16	30-60
PSD-P	0	0	1	3	7	0	4	0	1	1	5-10
Wr	86	89	84	82	86	81	90	83	83	86	---
YEP											
CPUE	34	56	44	30	8	21	36	28	56	23	≥ 30
PSD	93	21	17	29	56	40	23	41	63	86	30-60
PSD-P	51	10	5	2	0	0	5	4	7	12	5-10
Wr	114	101	102	104	106	103	113	107	107	108	---
Electrofishing											
SMB [1]											
CPUE	---	---	---	---	77	---	51	---	286	---	---
PSD	---	---	---	---	44	---	27	---	30	---	40-70
PSD-P	---	---	---	---	25	---	4	---	6	---	10-20
Wr	---	---	---	---	89	---	97	---	89	---	---

[1] Spring night electrofishing-SMB.

[2] Monofilament gill net mesh size change (0.75”, 1.00”, 1.25”, 1.50”, 2.00” and 2.50”)

Table 4. Year class distribution based on the expanded age/length summary for black crappie sampled in frame nets from Pickerel Lake, 2009-2014.

	Year Class													
Survey Year	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
2014					8					10				
2013	---				45	6				111				1
2012	---	---			22	2			1	20				
2011	---	---	---		3				2	65				1
2010	---	---	---	---					2	68				2

Table 5. Weighted mean TL (mm) at capture for black crappie age-1 through age-10 sampled in frame nets (expanded sample size) from Pickerel Lake, 2006-2014.

	Age									
Year	1	2	3	4	5	6	7	8	9	10
2014	---	---	---	253(8)	---	---	---	---	298(10)	---
2013	---	---	220(45)	238(6)	---	---	---	291(111)	---	---
2012	---	176(22)	226(2)	---	---	261(1)	279(20)	---	---	---
2011	88(3)	---	---	---	243(2)	263(65)	---	---	---	296(1)
2010	---	---	---	225(2)	251(68)	---	---	---	315(2)	---
2009[1]	---	---	187(6)	231(197)	---	---	---	298(1)	---	---
2008	---	---	201(259)	236(1)	---	---	285(7)	291(2)	---	294(8)
2007	---	153(286)	213(3)	---	273(1)	286(9)	---	---	299(33)	---
2006	100(1)	139(3)	---	---	270(3)	---	---	291(13)	---	---

[1] Older black crappie were sampled, but are not reported in this table

Table 6. Year class distribution based on the expanded age/length summary for walleye sampled in gill nets and associated stocking history (# stocked x 1,000) from Pickerel Lake, 2009-2014.

	Year Class													
Survey Year	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
2014		1	5	41	23	1	1	1	1					1
2013	---		1	19	68	6	4	3	4				1	
2012	---	---		7	26	4	4	4	7		1			1
2011	---	---	---		5	3	25	10	36	2	1			3
2010	---	---	---	---			17	14	26		1	1		
# stocked														
Fry														
sm. fingerling		93												
lg. fingerling				19	17		15	1	25		27	19	14	56

Table 7. Weighted mean TL at capture (mm) for walleye age-1 through age-10 sampled in experimental gill nets (expanded sample size) from Pickerel Lake, 2005-2014. Note: sampling was conducted at approximately the same time during each year allowing comparisons among years to monitor growth trends.

	Age									
Year	1	2	3	4	5	6	7	8	9	10
2014[1]	184(1)	305(5)	350(41)	367(23)	463(1)	416(1)	406(1)	443(1)	---	---
2013[1]	186(1)	277(19)	346(68)	385(6)	412(4)	421(3)	442(4)	---	---	---
2012[1]	207(7)	277(26)	312(4)	376(4)	---	417(7)	---	483(1)	---	---
2011	178(5)	277(3)	333(25)	377(10)	385(36)	363(2)	380(1)	---	---	546(3)
2010	---	258(17)	311(14)	322(26)	---	433(1)	398(1)	---	---	---
2009	---	258(3)	316(18)	358(2)	385(3)	563(1)	486(2)		486(1)	
2008[1]	190(3)	262(19)	331(3)	375(10)	447(3)	393(3)	461(2)	---	---	---
2007	211(6)	295(2)	358(31)	388(15)	445(8)	433(16)	489(3)	---	---	---
2006	---	300(26)	333(34)	387(15)	398(49)	469(3)	---	---	495(1)	---
2005	---	255(12)	310(15)	349(47)	---	---	408(1)	---	---	---

[1] Older walleye were sampled, but not reported in this table.

Table 8. Stocking history including size and number for fishes stocked into Pickerel Lake, 2000-2014. LMB= largemouth bass; SMB= smallmouth bass; WAE= walleye

Year	Species	Size	Number
2001	LMB	fingerling	8,350
	WAE	large fingerling	56,250
2002	WAE	large fingerling	13,695
2003	WAE	large fingerling	18,582
2004	SMB	fingerling	700
	WAE	large fingerling	26,940
2006	LMB	fingerling	101,500
	WAE	large fingerling	25,146
2007	WAE	large fingerling	765
2008	WAE	large fingerling	15,135
2010	WAE	large fingerling	17,442
2011	WAE	large fingerling	18,585
2013	WAE	small fingerling	93,410

Table 9. Year class distribution based on the age/length summary for yellow perch sampled in gill nets from Pickerel Lake, 2009-2014.

	Year Class											
Survey Year	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
2014			6	27	67	38	3					
2013	---		1	27	127	149	30		3	2		
2012	---	---		22	44	79	25	3	8	2	3	
2011	---	---	---		30	130	65	7	11	7	3	1
2010	---	---	---	---		22	68	11	24	20	4	

Table 10. Weighted mean TL (mm) at capture by gender for yellow perch captured in experimental gill nets (expanded sample size) from Pickerel Lake, 2009-2014.

	Age							
Year	1	2	3	4	5	6	7	8
2014								
Male	---	158(1)	192(2)	217(10)	228(12)	231(1)	---	---
Female	---	144(5)	205(30)	232(59)	250(20)	---	---	---
Combined	---	147(6)	202(27)	228(67)	240(38)	231(3)	---	---
2013								
Male	99(1)	133(9)	183(18)	210(15)	234(1)	---	---	---
Female	---	140(18)	194(122)	228(123)	248(27)	---	268(3)	277(2)
Combined	99(1)	137(27)	193(127)	222(149)	247(30)	---	268(3)	277(2)
2012								
Male	97(8)	146(14)	185(12)	218(5)	---	224(4)	238(1)	---
Female	105(14)	154(29)	197(68)	229(18)	239(3)	260(3)	265(1)	269(3)
Combined	102(22)	150(44)	195(79)	224(25)	239(3)	237(8)	252(2)	269(3)
2011								
Male	94(13)	142(26)	181(13)	---	---	215(1)	---	---
Female	95(17)	148(108)	195(48)	223(7)	238(11)	254(6)	256(3)	251(1)
Combined	95(30)	146(130)	192(65)	223(7)	238(11)	248(7)	256(3)	251(1)
2010								
Male	98(8)	144(7)	185(2)	---	200(3)	---	---	---
Female	95(12)	147(61)	195(9)	222(24)	226(17)	233(4)	---	---
Combined	96(22)	147(68)	193(11)	222(24)	222(20)	233(4)	---	---
2009								
Male	---	---	162(2)	189(5)	247(1)	---	---	---
Female	---	150(2)	174(7)	200(10)	220(17)		---	---
Combined	---	150(2)	171(9)	196(15)	221(18)	220(1)	---	---

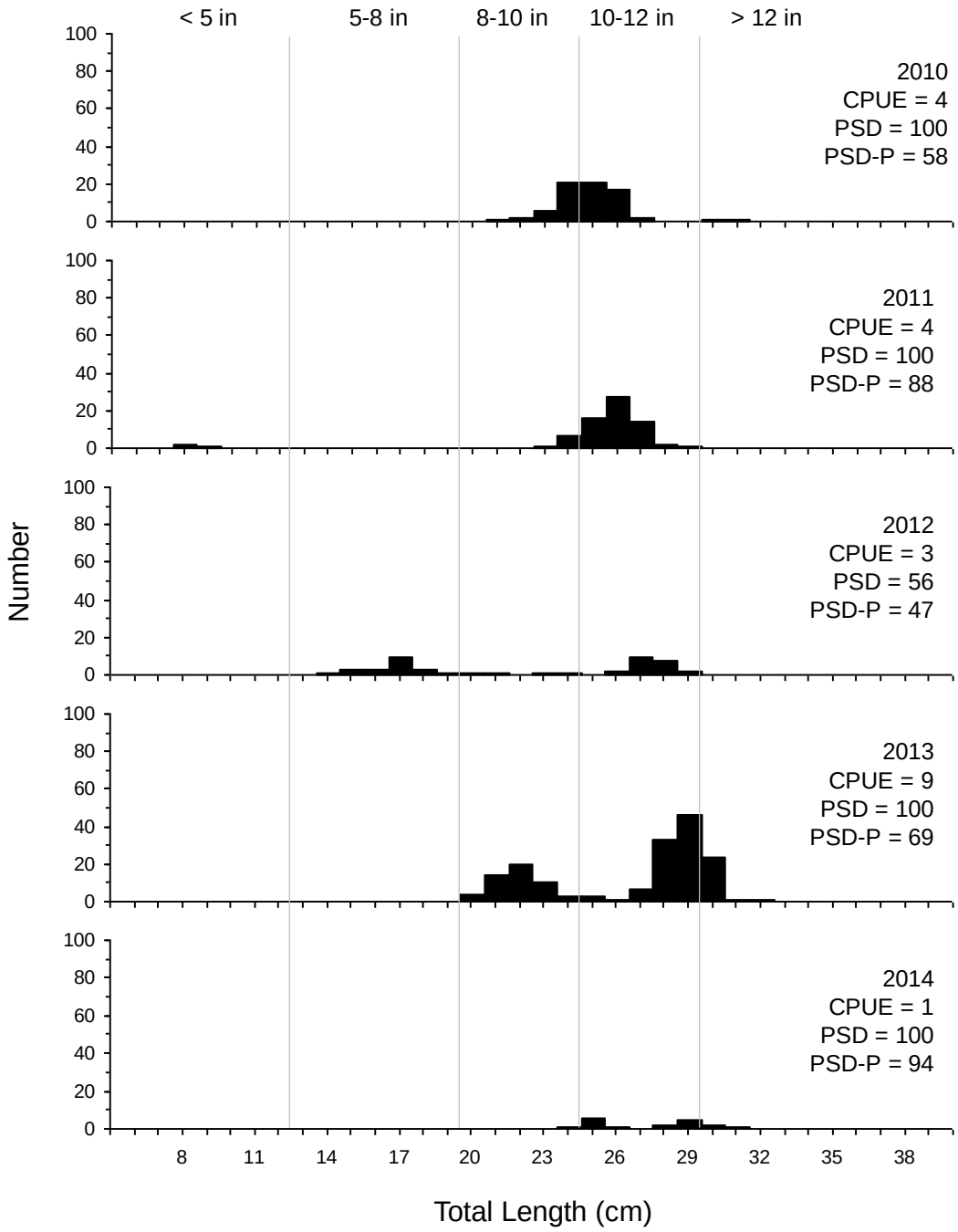

Figure 3. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for black crappie captured using frame nets in Pickerel Lake, 2010-2014.

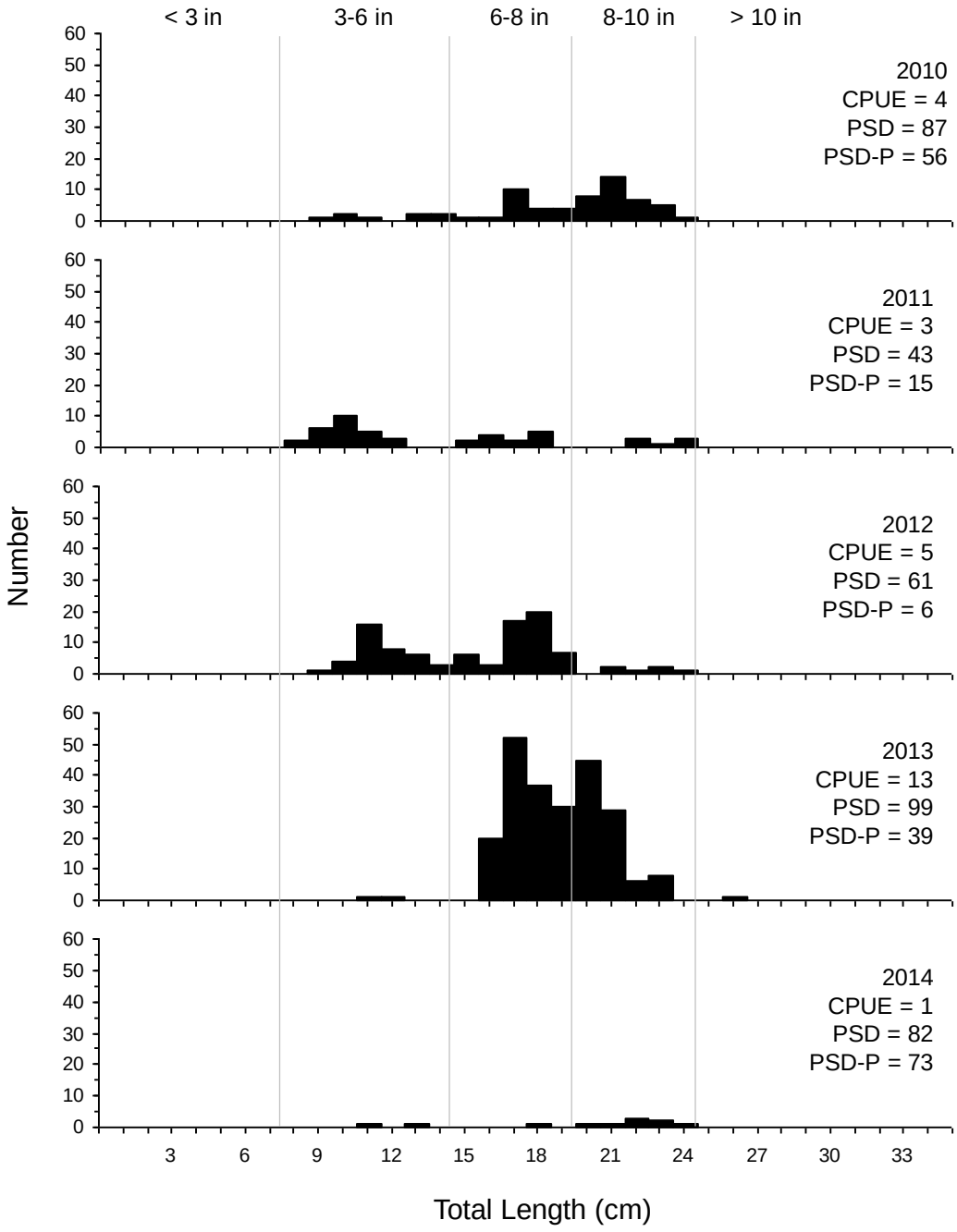

Figure 4. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for bluegill captured using frame nets in Pickerel Lake, 2010-2014.

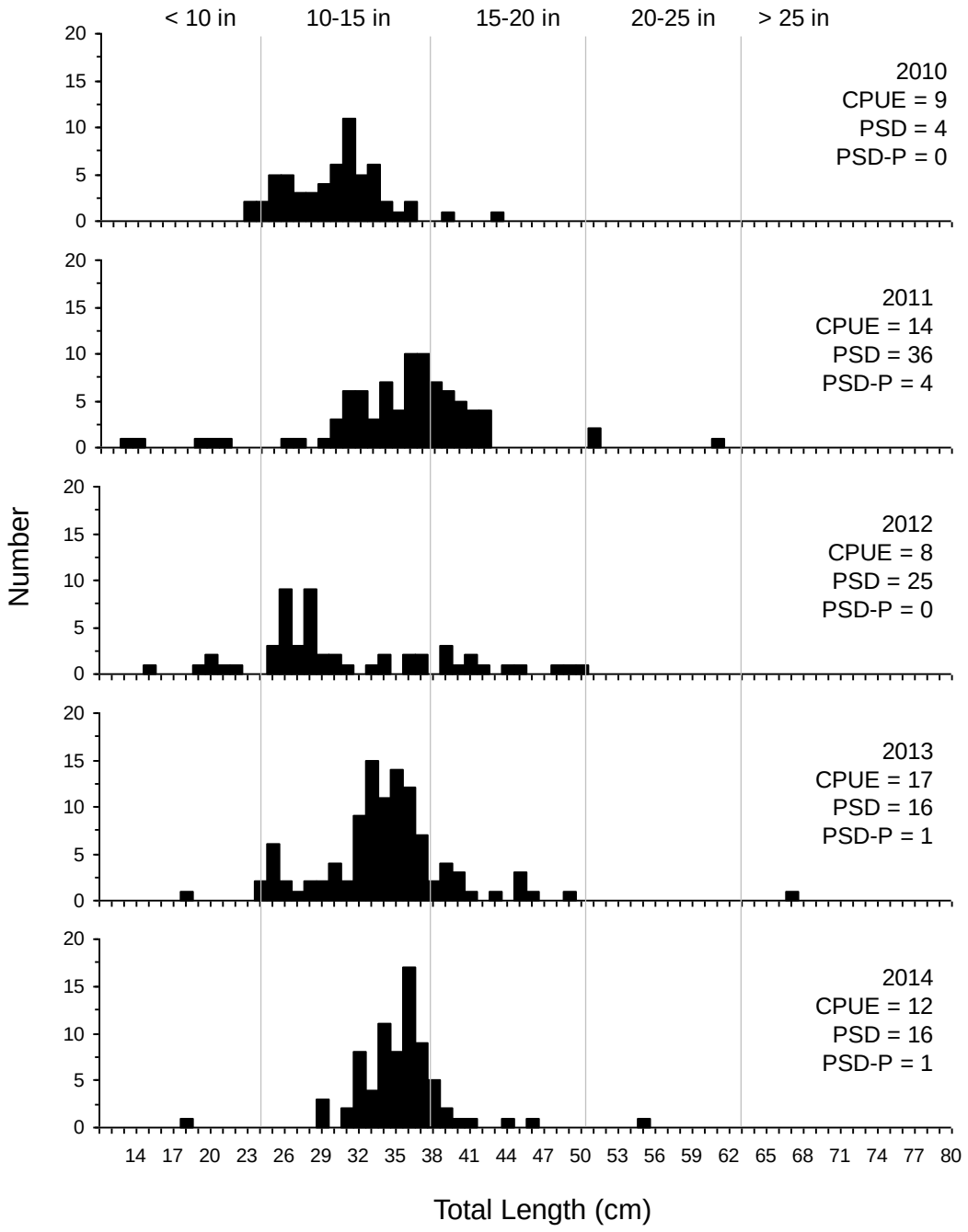

Figure 5. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for walleye captured using gill nets in Pickerel Lake, 2010-2014.

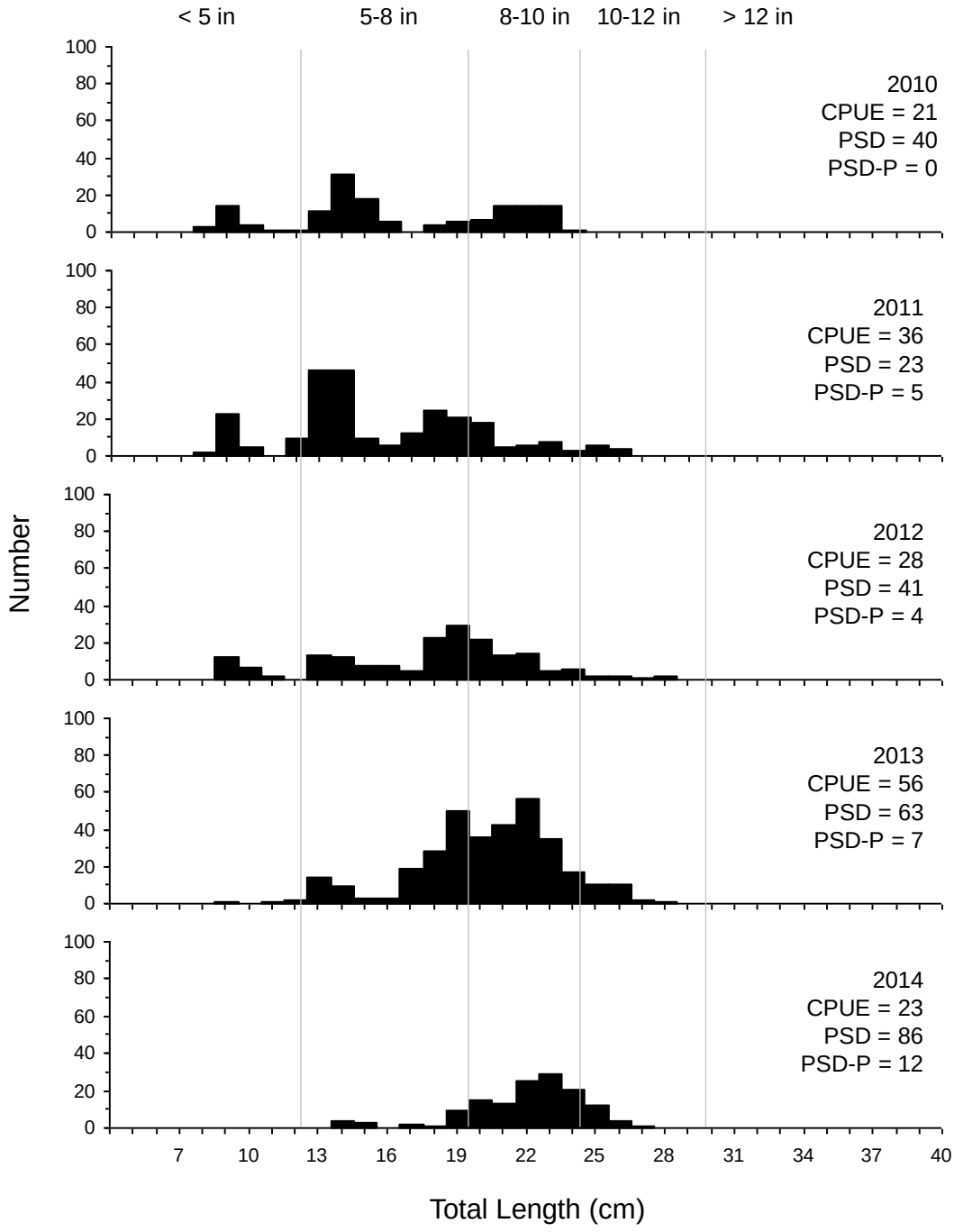

Figure 6. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for yellow perch captured using gill nets in Pickerel Lake, 2010-2014.

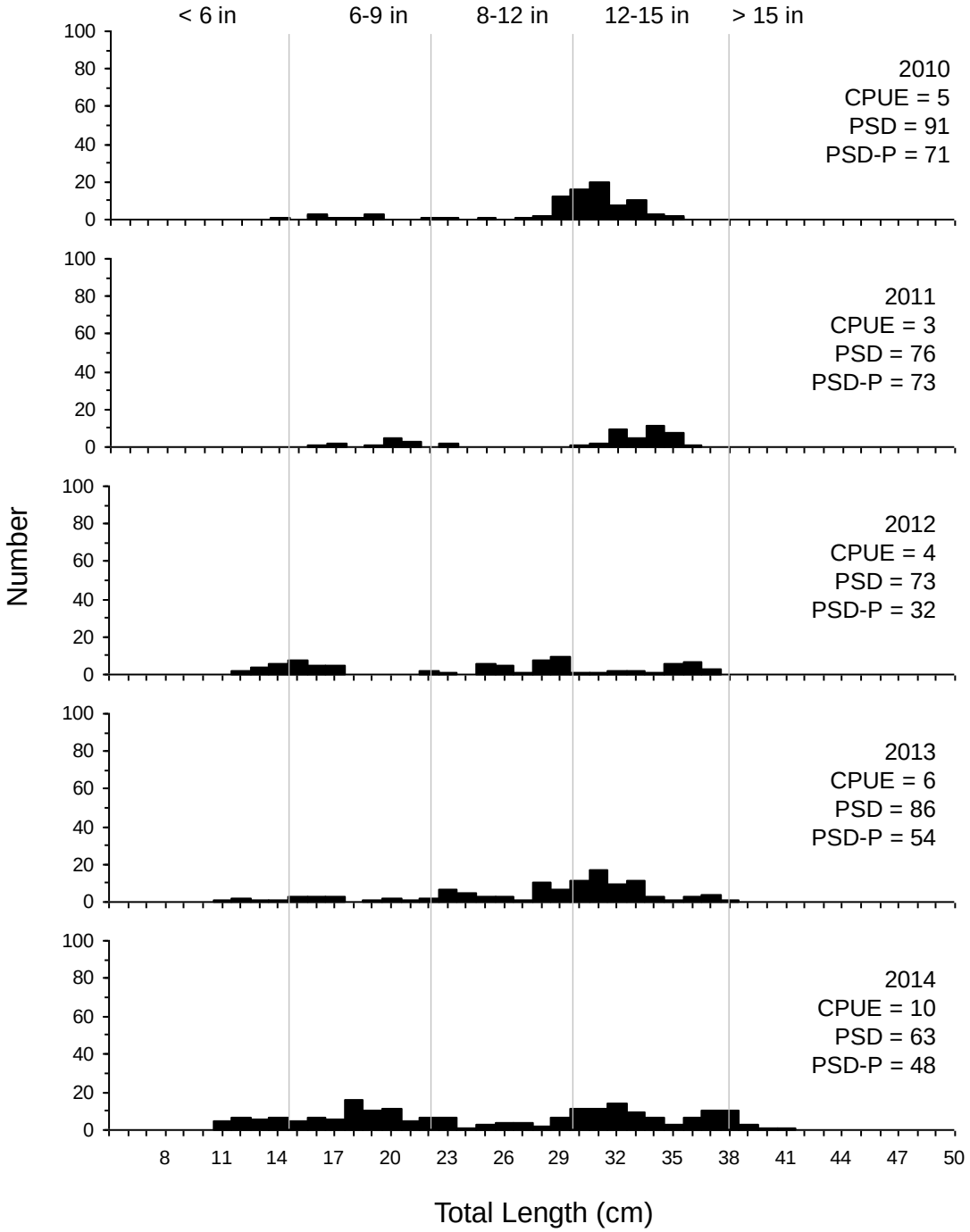

Figure 7. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for black bullhead captured using frame nets in Pickerel Lake, 2010-2014.

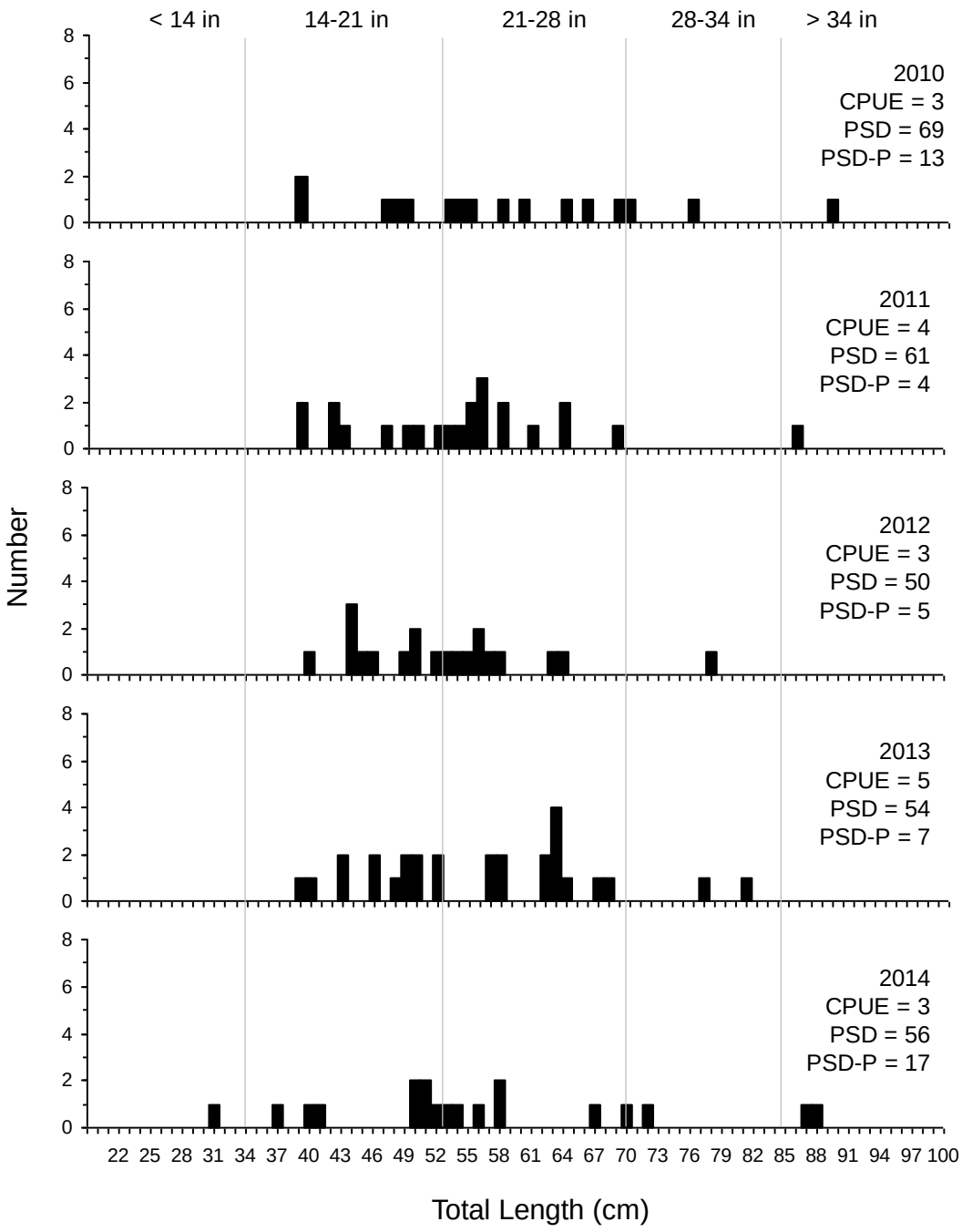

Figure 8. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for northern pike captured using gill nets in Pickerel Lake, 2010-2014.

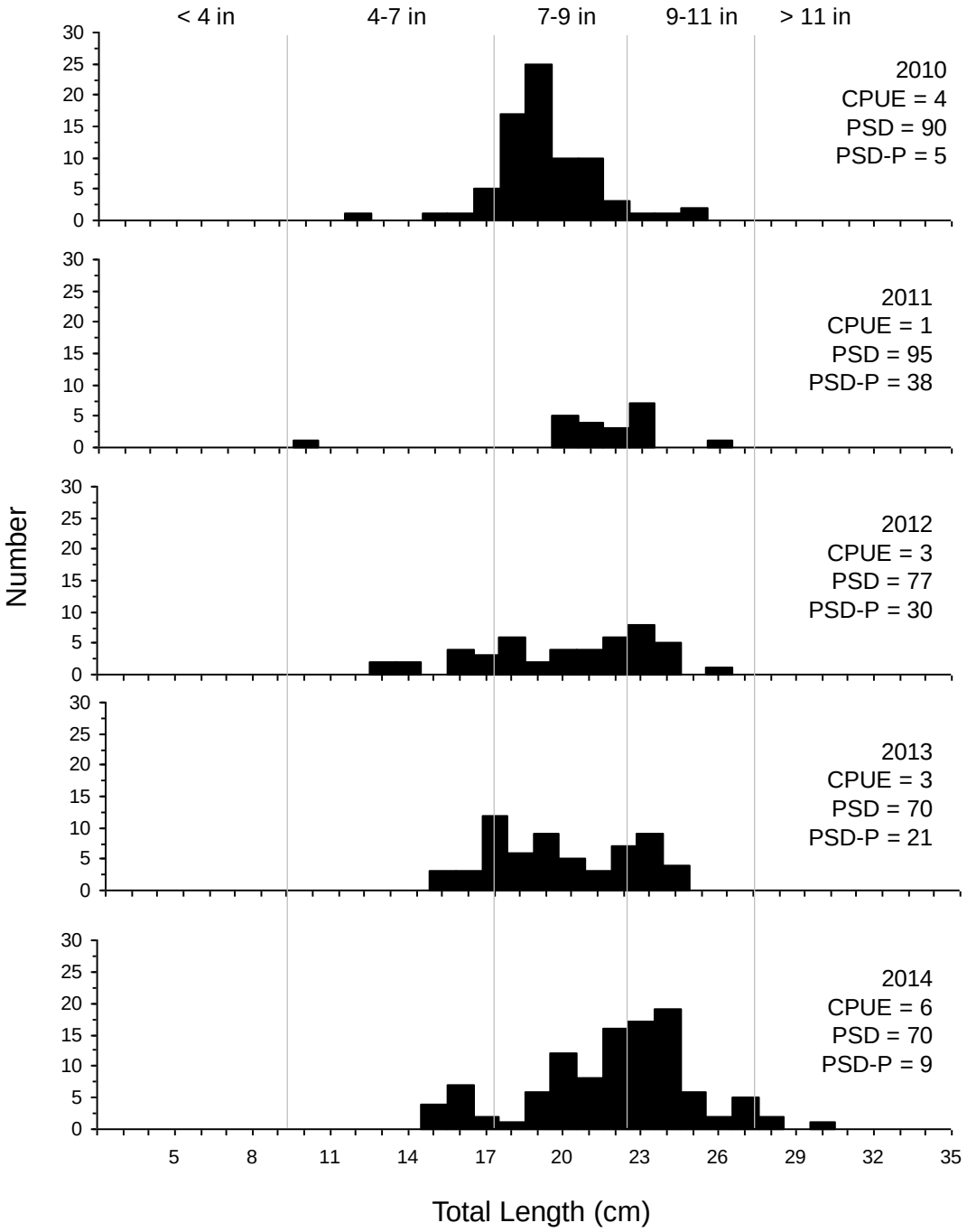

Figure 9. Length-frequency histogram, catch rate of stock-length fish (CPUE), proportional size distribution of quality- (PSD) and preferred-length (PSD-P) fish for rock bass captured using frame nets in Pickerel Lake, 2010-2014.